

## Chapter 2 Review: Biochemistry

### Vocabulary

1. Pure substance, 92 naturally occurring.
2. Pure substance ex.  $H_2O$ .
3. Composed of subatomic particles.
4. Positively charged.
5. Negatively charged.
6. Neutral.
7. Bond where electrons are transferred.
8. Weak bond between O and H.
9. Bond where electrons are shared.
10. Compounds that contain carbon.
11. Has a positive and negative pole.
12. No positive or negative pole.
13. Has lost or gained an electron.
14. Suffix for sugars.
15. Macromolecules with 1:2:1, C:H:O ratio.
16. Common name for carbohydrate.
17. Single sugar unit.
18. Double sugar unit.
19. Many sugar units.
20. Plant sugar, common name.
21. Main carbohydrate building block.
22. Name of reaction that produces carbohydrates.
23. Carbohydrate component of plant cell walls.
24. Animal starch.
25. Fats.
26. Lipid made of glycerol and 3 fatty acids.
27. All single C-C bonds.
28. Building blocks of a triglyceride.
29. Contains double or triple C-C bonds.
30. Liquid fat.
31. Lipid with polar region.
32. Lipid with 'honeycomb' structure.
33. Polypeptide.
34. Protein building block.
35. 4 components of an amino acid.
36. Amino acid example.

37. Bond formed between 2 amino acids.
38. 2 specialized proteins.
39. 3 factors which can affect enzyme reaction rate.
40. Lowers activation energy in reactions.
41. Area of enzyme which joins substrate.
42. Suffix for enzymes.
43. Model for enzyme substrate complex.
44. Molecule on which enzyme works.

**Discussion:**

1. Give a molecular explanation as to why cellulose provides plant cell walls with such support.
2. Using an example, describe dehydration synthesis. Explain its role in biological systems.
3. Why are unsaturated fats considered to be healthier than saturated? Give a thorough molecular explanation.
4. What factors can affect the rate of an enzyme reaction? Why?
5. How do enzymes lower the activation energy of a biochemical reaction?
6. Explain the induced fit model of enzyme action.
7. What potential harm can a misshapen protein do to a biological system?